

Response to Office Action Dated 03/03/2006
U.S. Patent Application Serial No. 10/812,856

REMARKS

Claims 2-4 have been amended substantially to better conform them to U.S.P.T.O. practice. Claim 1 is directed to a nonelected invention, is withdrawn and not amended. Basis for amendment of Claim 2 is found, for example, in paragraphs [0001], [0005], [0008] and Figure 3. Basis for amendment of Claim 3 is found, for example, in paragraphs [0014], [0021] and Figure 1. Basis for amendment of Claim 4 is found, for example, in paragraphs [0001], [0005], [0027] and [0028].

Election

Applicant affirms the election of the invention of Group II, Claims 2-4, without traverse.

Claim Rejections 35 U.S.C. § 112

The term "resultant" in Claim 2 has been removed. The phrase "The carbon nanotubes" in line 1 of Claim 4 has been removed. The narrative nature of the claims has been corrected. Claim 1 is withdrawn and has not yet been amended.

Claim Rejections 35 U.S.C. § 103

Claims 2-4 have been rejected as obvious in view of Smalley et al. (U.S. Patent 6,813,714 B1). Smalley et al. relates to a method of making carbon nanotubes, as shown in Figs. 1 and 3, where tube 12, within which reactions take place, is neither used to seal or protect the nanotubes nor prevent reaction of the bundles.

Applicant has substantially amended Claim 2. The amended claim recites an assembly compressing the nanotube bundles sealed in a quartz sheath that has been axially extended (per Fig. 3c) wherein the sheath protects the bundles resisting their reaction. These are claim limitations as the court stated in In re Boe and Duke, 184 U.S.P.Q. 38, 40 (1974-C.C.P.A.):

"This court has stated that all limitation must be considered and that it is error to ignore specific limitations distinguishing over the references. In re Saether, 181 U.S.P.Q. 36, 39 (1974 C.C.P.A.); In re Glass, 176 U.S.P.Q. 489, 491 (1973 C.C.P.A.)."

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Amended Claim 3 has additional limitations relating to the type data gathered in Fig. 1. Amended Claim 4 is directed to the outside diameter (O.D.) of the quartz sheath being less than about 0.1 mm, recognizing that before drawing and quenching the tube is about 5 mm O.D. (paragraph [0026]).

Smalley et al. does not recognize any advantage of sealing the highly electrically conductive carbon nanotubes in quartz. At the bottom of Column 3 and the top of Column 4, Smalley et al. lists examples of carbon nanotube use. Smalley et al. presents no evidence that resembles the sealed nanotube bundles of this invention.

Smalley et al.'s nanotube growth is based on the vapor transport of graphite vapor mixed with transition metal elements which let the graphite deposit on the metal substrate to form single wall nanotube, whereas the applicant's claimed invention starts with bundles of multi-wall nanotubes. The material is then vacuum-sealed in a quartz tube. When heated, the graphite bundle and quartz are drawn while they are red-hot at a high temperature between 900 and 1300°C, and subsequently quenched; the internal pressure of the quartz tube would give a squeezing pressure on the graphite bundles toward its radial direction.

Claim 2 contains further limitations in terms of tension not seen in Smalley et al. and Claim 3 contains further limitations in that the quartz stretch has an outside diameter less than about 0.1 mm. Both of these claims should be allowable.

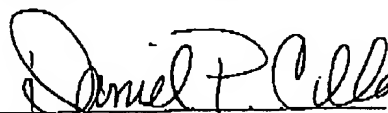
Applicant respectfully submits that Smalley et al. does not teach or make obvious to one skilled in the art at the time of the invention the amended Claims 2-4.

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Summary

In review of the preceding amendments to and arguments, applicant respectfully submits that pending Claims 2-4 are in condition for allowance and requests consideration and allowance of these claims. For the examiner's convenience, a copy of In re Boe and Duke, cited previously, is included.

Respectfully submitted,



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3. Patentability — Subject matter for patent monopoly — Process, product and apparatus (§51.613)

In *re* Neugebauer, 141 USPQ 205, held that unobviousness of final product was not determinative of unobviousness of method; nevertheless, this is a significant factor to consider in viewing subject matter as a whole.

4. Words and phrases (§70.)

Statement in reference that textile oils result in satisfactory lubricating finish for certain polymers "only" when employed with certain metal soaps does not exclude use of other ingredients in finish inasmuch as reference also states that oils cannot be used to lubricate filaments because of harmful effect of such oils, thus compelling an interpretation that oils may be used satisfactorily provided certain metal soaps are included in finish.

Particular patents—Yarn

Boe and Duke, Release Finish for Yarns Containing Segmented Elastomers, rejection of claims 1 to 9 of application affirmed.

Appeal from Board of Appeals of the Patent Office

Application for patent of Norman W. Boe and Bascom H. Duke, Serial No. 112,766, filed Feb. 4, 1971; Patent Office Group 162. From decision rejecting claims 1 to 9, applicants appeal. Affirmed.

KELLY O. CONLEY, Pensacola, Fla., for appellants.
JOSEPH F. NAKAMURA (ROBERT D. EDWARDS of counsel) for Commissioner of Patents.

Before MARKEV, Chief Judge, and RICH, BALDWIN, LANE, and MILLER, Associate Judges.

MILLER, Judge.

This is an appeal from the decision of the Patent Office Board of Appeals affirming the examiner's rejection under 35 U.S.C. 103 of claims 1-9—all the claims in application serial No. 112,766, filed February 4, 1971, for "Release Finish for Yarns Containing Segmented Elastomers." We affirm.

INVENTION

The invention involves a process for reducing tackiness of freshly spun filaments, composed at least partly of a segmented elastomeric polymer, by applying an aqueous,

¹ Segmented elastomeric polymers consist of segments of a high-melting crystalline polymer, such as

action, and same meaning. *Procter & Gamble Co. v. Conway*, 57 CCPA 865, 419 F.2d 1332, 164 USPQ 301 (1970).

[3] Appellee has referred to a number of third party registrations which, appellee submits, indicate that appellant does not possess exclusive rights to the representation of a tree, as applied to spices, seasonings, or other food products. Appellee has also introduced 38 third-party registrations, which include the word SPICE, for the purpose of showing that SPICE is commonly used in registered marks applied to spices, seasonings, and other food products. While third-party registrations are to be considered, they are of little help and do not control our determination of whether the marks are so similar that they are likely to cause confusion, mistake, or deception. *Clairol Incorporated v. Roux Laboratories*, supra.

[4] Appellee further argues that the commercial impression created by each mark is significantly different. Thus, it is contended that SPICE ISLANDS connotes a group of islands in Indonesia where the climate is semi-tropical, while SPICE TREE serves to create the impression of a fanciful tree on which various spices are grown. We do not find such an argument persuasive. Suffice to say, we note that it overlooks the fact that appellant uses its mark SPICE ISLANDS in connection with its tree mark.

For the foregoing reasons, the decision of the Trademark Trial and Appeal Board is reversed.

Court of Customs and Patent Appeals

In *re* Boe and Duke

No. 74-555 Decided Dec. 5, 1974

PATENTS

1. Patentability — Invention — In general (§51.501)

All limitations must be considered in considering obviousness under 35 U.S.C. 103; it is error to ignore specific limitations distinguishing over the references.

2. Pleading and practice in Patent Office — Rejections (§54.7)

Use of applicants' admission that specific filaments are well known does not constitute a new ground of rejection where filaments are disclosed in reference.

spun filaments to prevent excessive yarn tension during drawing by minimizing friction between the filaments. Appellants have conceded for purposes of this appeal that the aqueous emulsion of Barrett may be considered the same as that of appellants. The tension problem caused by tackiness and the segmented elastomeric polymers are not mentioned in Barrett, but the aqueous emulsion is disclosed to be suitable for a wide variety of synthetic polymeric substances, including polyurethanes, hydrocarbon polymers, and polyesters, which can be used in making segmented elastomeric polymers.

Yuk¹ discloses that the tackiness of segmented elastomeric polymers may be avoided by application of an anhydrous lubricating finish of textile oils and certain finely-divided soaps. Appellants rely heavily upon the following statement from Yuk (emphasis by appellant):

I have discovered that textile oils make a satisfactory finish for elastic filaments from segmented copolymers only when there is dispersed in such oils essentially colorless finely-divided soaps of certain metals (Groups I, II, and III of the periodic table).

Rejections

Product claims 6-8 were rejected for obviousness under 35 U.S.C. 103 over Barrett view of Yuk or vice versa. The examiner reasoned that since the lubricating finish of Barrett can be used on a wide variety of polymers including polyurethanes, and since the segmented elastomeric polymers of Yuk can be made from polyurethanes, it would be obvious to one of ordinary skill in the art to substitute Yuk's filaments of the segmented elastomeric polymers for the synthetic filaments of Barrett. Conversely, it would be obvious to one of ordinary skill in the art to substitute the lubricating finish of Barrett for the lubricating finish of Yuk.

The examiner's rejection of process claims 1-5 and 9 was simply stated in these words:

Claims 1-5 and 9 are rejected under U.S.C. 103 as obvious and unpatentable over Barrett et al. The claimed method considered to define nothing more than old and obvious method of applying a lubricating finish to synthetic polymeric filaments as evidenced by Barrett et al., example I, VII, claims 3 and 5. Even if final product were novel, this would not

May 2, 1960, to Barrett, Estes, and Stow, Jr., "Yarn Manufacture and Products Thereby."

¹ United States Patent 3,039,895, issued June 1962, on application serial No. 18,264, filed by Barrett.

² United States Patent 3,113,369, issued December 10, 1963, on application serial No. 25,902, filed

Prior Art

Barrett² discloses a method of applying an aqueous, lubricating finish emulsion to freshly

a polyurethane, alternating with segments of a low-melting, amorphous polymer, such as a polyester or hydrocarbon polymer. Illustrative of segmented elastomeric polymers are spandex fibers which employ a polyurethane as the crystalline, high-melting polymer.

² United States Patent 3,113,369, issued December 10, 1963, on application serial No. 25,902, filed

a. forming said filaments;
b. applying to said filaments an aqueous emulsion containing by weight:

(1) between 1 and 15% emulsifiable wax selected from the group consisting of paraffin waxes, microcrystalline waxes and polyethylene waxes,
(2) between 10 and 45% textile oil lubricant, and
(3) sufficient emulsifier to maintain said wax and said textile oil in suspension in said emulsion; and

c. collecting said filaments in an orderly fashion.

6. A lubricated filament composed at least partially of a segmented elastomeric polymer, said filament having deposited thereon between 1 and 5% based on the weight of said filament of a lubricant composition, said composition comprising based on the weight of said filament:

a. between 0.01 and 1.0% of an emulsifiable wax selected from the group consisting of paraffin waxes, microcrystalline waxes, and polyethylene waxes;
b. between 0.5 and 3.5% of a textile oil; and
c. between 0.1 and 2.5% of an emulsifier.

2. Evidence — Expert testimony (936.10)
Fraud, deception and palming of (658.55)

Plaintiff has burden in unfair competition action to prove that defendant's conduct or is likely to cause confusion; he may charge it by (1) proving actual confusion expert testimony as to effect on parties is likely to have on average consumer, or (3) relying on court's fact finding to determine likelihood of deception.

3. Fraud, deception and palming (658.55)

Names — In general (658.701)

Absent source confusion, mere imitation certain successful features in another's product is not unlawful; features imitated be those characteristics of plaintiff's product in the trade; in addition, where and marks imitated are of common or usage, it must be shown that, as to employed, its primary significance in of consuming public is to identify product merely the product.

TRADEMARKS

4. Title — In general (657.851)

Plaintiff gave up any protectable in might have had by sharing his trademark and mark with competitor; name cannot be claimed for exclusive use of two competitors where it is consensus played by both.

UNFAIR COMPETITION

5. Names — Corporation and name (658.707)

"Pennsylvania Amish Co., Inc." similar to "Pennsylvania Dutch Co." as to breed confusion.

TRADEMARKS

6. Evidence — Of confusion (658.725)

UNFAIR COMPETITION

Names — Secondary (658.725)

Such incidental confusion as mis mail and freight does not create a fusion of source.

bricating finish compositions could not be employed for segmented elastomeric polymers?

In further seeking to overcome this rejection, appellants point to the alleged unexpected results in the suppression of tackiness. However, it appears that suppression of tackiness was an expected rather than an unexpected result inasmuch as Yuk was aware of the tackiness problem and noted in his examination that application of his lubricating finish resulted in an "oiled elastic filament showing substantially no tendency to stick."

In view of the foregoing, we hold that it would have been obvious to one of ordinary skill in the art to substitute Yuk's filaments of segmented elastomeric polymers for the filaments in Barrett or to substitute the lubricating finish of Barrett for that of Yuk. We agree with the board that the record provides no basis for believing that the lubricating finish of Barrett cannot be applied to the segmented elastomeric polymers of Yuk.

The decision of the board is affirmed.

Pennsylvania Court of Common Pleas, Cumberland County

PENNSYLVANIA DUTCH CO., INC. v.

PENNSYLVANIA

AMISH CO., INC., et al.

Decided Aug. 26, 1974;

as amended Sept. 12, 1974

UNFAIR COMPETITION

1. Fraud, deception and palming off (658.55)

Right to injunction in Pennsylvania state court against use of name and trade dress depends upon proof that as a result of defendant's conduct there is a real likelihood that average purchaser will confuse defendant's products with plaintiff's established name and reputation; all that is necessary is that defendant's conduct actually confused or that there is reasonable likelihood that average purchaser will be misled; possibility that while defendant may imitate plaintiff's business, it may not usurp plaintiff's investment and toil by representation, however unintentional, that its product is plaintiff's.

Although appellants argue that the teachings of Yuk would be interpreted by one skilled in the art to negative the use of the Barrett lubricating finish on segmented elastomeric polymers, it should be noted that Yuk actually issued before Barrett.

with which Barrett is concerned is sufficiently analogous to suggest to one skilled in the art that the aqueous emulsion of Barrett would offer a solution to the tension problem caused by tackiness. Cf. In re Pyc, 53 CCPA 877, 355 F.2d 641, 148 USPQ 426 (1966).

Accordingly, we hold the process claims to be obvious over Barrett and admitted prior art.

Product Claims

The main motivation for combining Barrett and Yuk is the similarity of the polymeric filaments treated with the lubricating finishes. Yuk discloses that the high-melting, crystalline segments may be made from a polyurethane, while the low-melting, amorphous segments may be derived from a polyester or a hydrocarbon polymer. In Barrett, a wide variety of polymers may be treated with the lubricating finish, including polyurethanes, hydrocarbon polymers, and polyesters.

[4] Appellants argue that Yuk teaches one skilled in the art away from using the Barrett lubricating finish on segmented elastomeric polymers because of Yuk's use of the word "only" in the statement quoted above ("PRIOR ART") that textile oils result in a satisfactory finish for segmented elastomeric polymers "only" when employed with certain metal soaps. This argument is apparently based upon an exclusionary interpretation of the word "only" in that appellants would have one skilled in the art interpret "only" as excluding the use of other ingredients in the lubricating finish and other lubricating finish compositions for segmented elastomeric polymers. However, we believe that one skilled in the art would have interpreted the word "only" in light of the background of the above-quoted statement wherein Yuk declares that "it has been generally accepted that oils cannot be used to lubricate rubber filaments because of the harmful effect of such oils on physical properties." This compels an interpretation that the textile oils may be used satisfactorily provided certain metal soaps are included in the lubricating finish. Yuk does not teach that more additives could not be used in the lubricating finish, or that other suitable lu-

* Counsel for appellants emphasized at oral argument that the lubricating finish of Yuk is substantially anhydrous and that the soaps in Yuk are not used as emulsifiers in the lubricating finish. Appellants' specification states that "many of the known emulsifying agents, which are capable of dispersing the wax and textile oil in an aqueous medium to form an emulsion which is stable over extended periods of time and at elevated temperatures, may be employed in the practice of this invention." No argument was made that the soaps of Yuk are unsuitable as emulsifiers in the lubricating finish of

controlling of obviousness of the method. See In re Neugebauer et al., 141 USPQ 205 and In re Jerome J. Kanter, 158 USPQ 331.

In agreeing with the examiner, the board merely adopted the reasons of the examiner as its own and further stated that there was no reason to believe that the lubricating finish of Barrett could not be applied to the segmented elastomeric polymer filaments of Yuk with the resultant reduction in tackiness of the treated filaments.

OPINION

Process Claims

[1] Although the claimed method involves manipulative steps and a lubricating finish that are known, the examiner's failure to cite a reference showing filaments composed at least partly of a segmented elastomeric polymer leaves us with a rejection which ignores a specific limitation of the claims. This court has stated that all limitations must be considered and that it is error to ignore specific limitations distinguishing over the references. In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Glass, 472 F.2d 1388, 176 USPQ 489 (CCPA 1973). However, we do not regard this as reversible error here, since Barrett does disclose filaments made from polyurethanes, hydrocarbon polymers, and polyesters, which can be used to make the admittedly well-known filaments composed of a segmented elastomeric polymer. Cf. In re Schneider, 481 F.2d 1350, 179 USPQ 46 (CCPA 1973); In re Wadlinger, 496 F.2d 1200, 181 USPQ 826 (CCPA 1974).

The examiner's failure to cite Yuk leaves us with only admitted prior art (segmented elastomeric polymers) and Barrett, which does not refer to the tension problem caused by tackiness or purport to solve the problem. However, the tension problem caused by friction

[2] Under the circumstances of this case, we do not regard use of appellants' admission that such filaments are "well known" to constitute a new ground of rejection. But see In re Hunter, 48 CCPA 822, 286 F.2d 619, 128 USPQ 544 (1961).

[3] Thus, appellants' product—a lubricated filament composed at least partly of a segmented elastomeric polymer with reduced tackiness—can be considered novel. In re Neugebauer, 51 CCPA 1138, 330 F.2d 353, 141 USPQ 205 (1964), cited by the examiner, which was deemed controlling in In re Kanter, 55 CCPA 1395, 399 F.2d 249, 158 USPQ 331 (1968), merely held that unobviousness of the final product was not determinative of unobviousness of the method. Nevertheless, it is clear that this is a significant factor to be considered in viewing "the subject matter as a whole." In re Naylor, 54 CCPA 902, 369 F.2d 765, 152 USPQ 106 (1966). See also